

**Programmatic Biological Assessment for
Transformation of the 2nd Brigade
25th Infantry Division (Light), U.S. Army**

Island of Hawaii

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for

U.S. Army Corps of Engineers
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April 2003

EXHIBIT 13

6.8 Battle Area Course (BAX)

The general location of the BAX would overlay Ranges 11 and 12 (Figure 29). The course would be a combination of target types at varying densities and distances, obstacles, and landing zones. The range would support dismounted live-fire operations, independent of, or simultaneously with supporting vehicles. The BAX could directly affect (1) 392 *Haplostachys haplostachya* plants, or 1.0% to 1.2% (Evans et al. 2002b); (2) 181 to 1030 *Silene hawaiiensis* plants, 1.0% to 4.3% (PTA NR 2003 database); and (3) 1 *Zanthoxylum hawaiiense* plant, or 0.3% to 0.4% of the statewide occurrence of these species (PTA NR database 2003).

6.8.1 Construction

Construction of the BAX would include a three-lane multipurpose range complex, targets, firing points, gun bunkers, breaching obstacles, buildings and facilities (mess, bleachers, bivouac area, storage, ammo loading dock, etc.), paving, site improvements, and demolition) (Figure 54). Some areas would be conditioned (i.e., lava would be mechanically smoothed). Construction of the BAX could remove all *Haplostachys haplostachya*, *Silene hawaiiensis*, and *Zanthoxylum hawaiiense* plants located during the survey (Arnett 2002a) and would have a **very high direct effect (5) and could be reduced to high (4)** by:

- Propagating plants from seed and cutting made from plants at the site.
- Outplanting seed grown and cuttings.
- Establishing new populations.
- If possible the Army will attempt to maintain habitat quality and the groupings in their current locations. However, because of the high risk of fire, even if these groupings can be maintained, the military effect level would remain **high (4)**, but could be reduced to **moderate (3)** by doing the measures listed above.

Indirect effects presented below would be **none (0) to very low, insignificant, or discountable (1)** to federally-listed endangered or threatened species.

6.8.1.1 Fire

Vehicles with catalytic converters, cigarette smoking, gas-powered tools (e.g., chain saws, weed whackers, etc.), and welding equipment are possible sources of fire ignition. The working area is sparsely vegetated and fire would not carry far from the construction site. Fire vulnerability effect would be **low (2)** and would be **reduced to very low, insignificant, or discountable (1)** by:

- Not allowing smoking (e.g., cigarettes), except in designated areas.
- Restricting vehicles with catalytic converters to sites without vegetation.
- Specifying restrictions and safety measures for generators, gas driven tools, welding equipment, etc. in contracts.

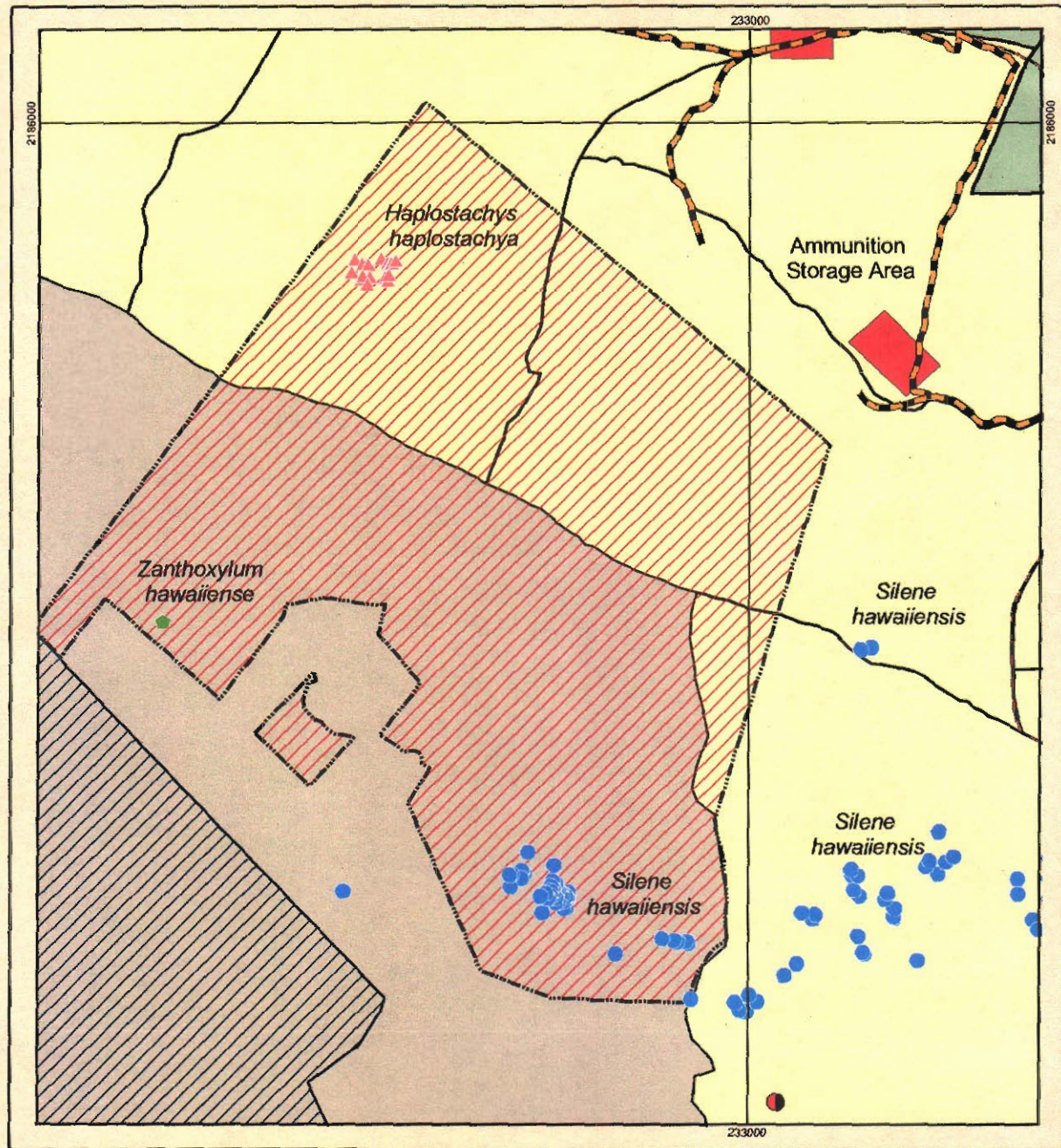
6.8.1.2 Alien Species Introductions

Construction of the BAX would require private vehicles, equipment, and personnel to be brought on to the site. Alien plant species and animals could be brought into the area on clothing or equipment. The potential of introducing new alien plant or animals to the site that affect federally-listed endangered or threatened species is **moderate (3) for plants and low (2) for animals**. Threats would be **reduced to very low, insignificant, or discountable (1)** by:

- Vehicles and equipment coming from outside the United States would pass through U.S. Department of Agriculture and U.S. Customs inspections.

Battle Area Course (BAX) Site **Pohakuloa Training Area**

Figure 29



1:30,000

0 0.25 0.5
Kilometers

0 0.25 0.5
Miles

Data Source: PTA NR Office 2003

Legend

- ▲ *Haplostachys haplostachya*
- *Silene hawaiiensis*
- *Zanthoxylum hawaiiense*
- Fixed Tactical Internet
- Primary Roads
- ICM
- Survey Area, BAX Proposed Site Location
- Ammunition Storage Area
- Impact Area

- All construction equipment would be thoroughly cleaned and inspected before being transported to the construction site.
- Vehicles would either be left at the construction site, confined to the PTA area, or would be recleaned before returning to the construction site.
- Every effort would be made to balance earthwork so no outside fill sources would be needed for the project. Areas with outside fill will be monitored for alien species.
- Construction sites would be periodically inspected by NR personnel for new alien species. Alien species would be documented and removed.
- Contractors and their employees would be educated on the need to wear clean clothes and to maintain clean vehicles when coming onto the construction site.

6.8.1.3 Noise

Because no federally-listed animal species have been documented in the area of the BAX, the effect of construction is **none (0)** and requires no minimization actions.

6.8.1.4 Soil Erosion

Soils would be displaced during construction. Erosion would be low, and **no (none, 0)** federally-listed species would be affected. No minimization action would be required.

6.8.1.5 Other Construction Effects

Construction activities include assembling equipment, moving materials, and erecting support structures. Hazards associated with construction equipment involve petroleum, oils, and lubricants (POL) in assembly areas and work sites. Night construction could affect Hawaiian dark-rumped petrels traveling to feeding areas. General construction effects on federally-listed endangered or threatened species would be **low (2)** at the site and would be reduced to **very low, insignificant, or discountable (1)** by:

- Following established Army protocols for POLs.
- Restricting construction to daylight hours.
- If construction occurs at night, supplementary lighting will be by shield lights, adjusting the light spectrum, using polarized light, or by some other means that will not attract Hawaiian dark-rumped petrels. Any downed birds would be documented, hospitalized, and reported to the NR Office. The FWS would be notified of any affected listed species. The Army would reinstate consultation.

6.8.2 Military Use

The BAX would support SBCT activities and would have **no direct (0) effect** on federally-listed endangered or threatened species because all federally-listed endangered or threatened species could be removed during construction activities. **Indirect effects** presented below would be **very low, insignificant, or discountable (1) to low (2)** on federally-listed endangered or threatened species.

6.8.2.1 Fire

Fire vulnerability would be affected by vegetation type and weapons used. All weapon systems would be available at the BAX and would include the use of artillery, attack helicopters, and fixed-wing, support aircraft. Fire vulnerability effect would be **high (4)** on federally-listed endangered or threatened species. This rating cannot be mitigated to a lower level because of the highly fire prone nature of the live-fire weapons. However, the following actions would be taken to reduce the extent of any fire that occurs: